CLAIMS

1. A system for designing a network-enabled workflow management module integrated with an intelligent search engine to provide for a real time analysis of workflow processes, said system comprising:

a workflow segment designer creating one or more workflow steps defining a set of routing rules for one or more resources that trigger said workflow steps;

a sub-flow designer creating one or more sub-flow processes, said sub-flow processes incorporating one or more of pre-existing internal workflow processes;

a condition designer creating one or more workflow conditions based on one or more formulas, said conditions specified in one of the following ways: success, failure, a percentage of a success or a percentage of a failure;

an external process designer creating one or more external process workflow objects, said objects exchanging data with one or more remote sources in said network;

a workflow analyzer analyzing in real-time said one or more workflow processes;

said system creating workflow processes using said workflow segment designer, sub-flow designer, condition designer and external process designer, and said system routing said one or more resources locally and remotely using said set of routing rules and said intelligent search engine, and said system analyzing, via said workflow analyzer, said created workflow process in real-time to optimize workflow functionality.

2. A system for designing a network-enabled workflow management module integrated with an intelligent search engine to provide for a real time analysis of workflow processes, as

3   per claim 1, wherein said system further comprising a deadline handler that provides for

4   control of workflow processing times through deadlines.

1   3.   A system for designing a network-enabled workflow management module integrated

2   with an intelligent search engine to provide for a real time analysis of workflow processes, as

3   per claim 2, wherein said deadlines is defined in one of the following ways: based on a value

4   extracted from a form or based on a predefined deadline.

1   4.   A system for designing a network-enabled workflow management module integrated

2   with an intelligent search engine to provide for a real time analysis of workflow processes, as

3   per claim 1, wherein said system further comprises a requestor filter to restrict said routing

4   based on identities of requestors triggering said workflow steps.

1   5.   A system for designing a network-enabled workflow management module integrated

2   with an intelligent search engine to provide for a real time analysis of workflow processes, as

3   per claim 1, wherein said intelligent search engine in a rules-based engine.

1   6.   A system for designing a network-enabled workflow management module integrated

2   with an intelligent search engine to provide for a real time analysis of workflow processes, as

3   per claim 5, wherein said rules associated with said rules engine are stored in a rules database.

1   7.   A system for designing a network-enabled workflow management module integrated

2   with an intelligent search engine to provide for a real time analysis of workflow processes, as

3   per claim 1, wherein said formulas are interpreted using said intelligent search engine to

4   determine appropriate workflow recipients for said one or more resources.

1   8.   A system for designing a network-enabled workflow management module integrated

2   with an intelligent search engine to provide for a real time analysis of workflow processes, as

3   per claim 1, wherein said created workflow processes are stored in a central database for future

4   access by other workflow processes.

1   9.   A system for designing a network-enabled workflow management module integrated

2   with an intelligent search engine to provide for a real time analysis of workflow processes, as

3   per claim 1, wherein said system further comprises a workflow administration manager setting

4   the frequency and priority of said created workflow processes.

1   10.   A system for designing a network-enabled workflow management module integrated

2   with an intelligent search engine to provide for a real time analysis of workflow processes, as

3   per claim 9, wherein said workflow administration manager is implemented using a Java

4   servlet.

1   11.   A system for designing a network-enabled workflow management module integrated

2   with an intelligent search engine to provide for a real time analysis of workflow processes, as

3   per claim 1, wherein said workflow analyzer further comprises a statistical analyzer analyzing

4   workflow history of said workflow processes.

1   12.   A system for designing a network-enabled workflow management module integrated

2   with an intelligent search engine to provide for a real time analysis of workflow processes, as

3   per claim 11, wherein said statistical analyzer further comprises:

4   an average processing time estimator calculating an average processing time of

5   each of said one or more created workflow processes;

6   a daily load estimator calculating a daily load associated with each user in said

7   system, and

8   a global load estimator calculating the overall load associated with each user in

9   said system.

1   13.   A system for designing a network-enabled workflow management module integrated

2   with an intelligent search engine to provide for a real time analysis of workflow processes, as

3   per claim 1, wherein said network comprises any of the following: local area network (LAN),

4   wide area network (WAN), HTTP network, world wide web (WWW), wireless network,

5   PSTN/PBX network, or Internet.

1   14.   A system for designing a network-enabled workflow management module integrated

2   with an intelligent search engine to provide for a real time analysis of workflow processes, as

3   per claim 1, wherein said remote source accessed by said external process workflow objects is

4   a remote database.

1   15.   A system for designing a network-enabled workflow management module integrated

2   with an intelligent search engine to provide for a real time analysis of workflow processes, as

3   per claim 1, wherein said one or more resources to be routed are further updated by accessing

4   a script library.

1   16.   A system for designing a network-enabled workflow management module integrated

2   with an intelligent search engine to provide for a real time analysis of workflow processes, as

3   per claim 15, wherein said script library is an application programming interface (API) library.

1   17.   A method for designing a network-enabled workflow management algorithm

2   integrated with an intelligent search engine to provide for a real time analysis of workflow

3   processes, said method comprising:

4   defining one more workflow events that trigger workflow processing;

5   building one or more workflow cycles using one or more workflow objects, said

6   step of building said one or more workflow cycle further comprising:

7   creating one or more workflow steps defining a set of routing rules for

8   one or more resources that trigger said workflow processing;

9   creating one or more sub-flow processes incorporating pre-existing

10   internal workflow processes;

11   creating one or more workflow conditions based on one or more

12   formulas;

13   creating one or more external process workflow objects for exchanging

14   data with one more remote sources in said network, and

15   customizing one or more routing and notification messages so said one or more

16   resources are routed in said workflow cycle based on customized routing types,

17   routing rules, routing options, and notification messages,

18   validating said created one or more workflow cycles, and

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19   analyzing said validated one or more workflow cycles in real-time to optimize

20   workflow functionality.

1   18.   A method for designing a network-enabled workflow management algorithm

2   integrated with an intelligent search engine to provide for a real time analysis of workflow

3   processes, as per claim 17, wherein said method further comprises setting deadline date

4   controlling workflow processing times in said one more workflow cycles.

1   19.   A method for designing a network-enabled workflow management algorithm

2   integrated with an intelligent search engine to provide for a real time analysis of workflow

3   processes, as per claim 18, wherein said deadline date is defined in any of the following ways:

4   with a handling margin that defines a predetermined amount of time said resources are to stay

5   unprocessed in said one or more workflow processes or defined based on an extracted value

6   from a form.

1   20.   A method for designing a network-enabled workflow management algorithm

2   integrated with an intelligent search engine to provide for a real time analysis of workflow

3   processes, as per claim 17, wherein said method further comprises restricting routing based on

4   identities of requestors triggering said workflow processing.

1   21.   A method for designing a network-enabled workflow management algorithm

2   integrated with an intelligent search engine to provide for a real time analysis of workflow

3   processes, as per claim 17, wherein said method further comprises setting the frequency and

4   priority of said created one or more workflow processes.

1 22. A method for designing a network-enabled workflow management algorithm

2 integrated with an intelligent search engine to provide for a real time analysis of workflow

3 processes, as per claim 17, wherein said method further comprises statistically analyzing said

4 validated one more workflow cycles.

1 23. A method for designing a network-enabled workflow management algorithm

2 integrated with an intelligent search engine to provide for a real time analysis of workflow

3 processes, as per claim 22, wherein said step of statistically analyzing said validated one or

4 more workflow cycles comprising:

5   calculating an average processing time associated with each of said one

6   or more created workflow processes;

7   calculating a daily load associated with each requestor in said one or

8   more work cycles, and

9   calculating a global load associated with each requestor in said one or

10   more work cycles.

1 24. A method for designing a network-enabled workflow management algorithm

2 integrated with an intelligent search engine to provide for a real time analysis of workflow

3 processes, as per claim 17, wherein said network comprises any of the following: local area

4 network (LAN), wide area network (WAN), HTTP network, world wide web (WWW),

5 wireless network, PSTN/PBX network, or Internet.

1   25.   A method for designing a network-enabled workflow management module

2 integrated with an intelligent search engine to provide for a real time analysis of workflow

3 processes, said method comprising:

4   creating one more workflow processes, said step of creating one or more workflow

5   processes further comprising:

6   creating one or more workflow steps defining a set of routing rules for one

7   or more resources that trigger said workflow steps;

8   creating one or more sub-flow processes, said sub-flow processes

9   incorporating one or more of pre-existing internal workflow processes;

10   creating one or more workflow conditions based on one or more formulas,

11   said conditions specified in one of the following ways: success, failure, a

12   percentage of a success or a percentage of a failure;

13   creating one or more external process workflow objects, said objects

14   exchanging data with one or more remote sources in said network, and

15   analyzing said created one or more workflow process in real-time to optimize

16   workflow functionality.

1   26.   A graphical user interface for designing a network-enabled workflow process

2 integrated with an intelligent search engine to provide for a real time analysis of workflow

3 processes, said interface comprising:

4   a workflow design area to design a workflow process, said workflow process

5   comprising one or more workflow process segments, said segments comprising at

6   least one remote workflow process segment for exchanging data with one or more

7   remote sources in a network, and

8   a properties panel to manipulate one or more properties associated with said one or

9   more workflow process segments.

1   27.   A graphical user interface for designing a network-enabled workflow process

2   integrated with an intelligent search engine to provide for a real time analysis of workflow

3   processes, as per claim 26, wherein said interface further comprises a workflow object store

4   comprising predefined workflow processes usable either as a new workflow process or as part

5   of an existing workflow process in said workflow design area.

1   28.   A graphical user interface for designing a network-enabled workflow process

2   integrated with an intelligent search engine to provide for a real time analysis of workflow

3   processes, as per claim 26, wherein said network comprises any of the following: local area

4   network (LAN), wide area network (WAN), HTTP network, world wide web (WWW),

5   wireless network, PSTN/PBX network, or Internet.

1   29.   An article of manufacture comprising computer usable medium having computer

2   readable code embodied therein which provides a graphical user interface for designing a

3   network-enabled workflow process integrated with an intelligent search engine to provide for a

4   real time analysis of workflow processes, said computer readable code comprising:

5   computer readable program code providing a workflow design area for designing a

6   workflow process comprising one or more workflow process segments, said

7   segments comprising at least one remote workflow process segment for exchanging

8   data with one or more remote sources in said network, and

9   computer readable program code providing a properties panel for manipulating one

10   or more properties associated with said one or more workflow process segments.

1   30.   An article of manufacture comprising computer usable medium having computer

2   readable code embodied therein which provides for an graphical user interface for designing a

3   network-enabled workflow process integrated with an intelligent search engine to provide for a

4   real time analysis of workflow processes, as per claim 26, wherein said computer readable

5   code further comprises:

6   computer readable code providing a workflow object store comprising predefined

7   workflow processes usable either as a new workflow process or as part of an

8   already existing workflow process in said workflow design area.